CLAIM OR CLAIMS

I claim:

1. A method to determine a hypothesis function with minimum squared error bound among hypothesis functions formed by convex combinations of the basis function outputs; given a set of basis functions, a set of inputs, and uniform squared error bounds for the basis functions over the inputs; the method comprising

forming a quadratic program with variables corresponding to convex combination weights, with constraints based on basis function outputs and basis function error bounds over the inputs, and with an objective function corresponding to an error bound for the function formed by a convex combination of basis function outputs,

and solving the quadratic program to determine a minimizing convex combination and a minimum of the objective function.

2. The method of claim 1, with the additional step of forming the hypothesis function by using the minimizing convex combination as weights on the basis function outputs.

3. The method of claim 1, with the additional step of returning the minimum of the objective function as a bound on the sum of squared errors for the hypothesis function over the inputs.

4. The method of claim 1, implemented using a general purpose computer.